

### Abstract of the Invention

The invention is directed to a system and method for non-invasive pipeline inspection. According to one embodiment, the system includes a processor, an analyzer, and a wave launcher. The wave launcher is adapted to transmit an input wideband waveform having a selected input energy into the pipeline along a longitudinal axis, and to receive from the pipeline a reflected component of the input waveform having a reflected energy. The analyzer is adapted to generate the input waveform, and to receive the reflected component of the input waveform from the wave launcher. The processor is adapted to compare the input waveform with the reflected component of the input waveform to determine characteristics.

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